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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,833	07/24/2001	Tadatoshi Danno	H-997	4278

7590 06/24/2003  
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EXAMINER

TOLEDO, FERNANDO L

ART UNIT PAPER NUMBER

2823

DATE MAILED: 06/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/910,833

Applicant(s)

DANNO ET AL.

Examiner

Fernando Toledo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 April 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 31-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 31-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 31, 32, 34 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Fjelstad, Joseph (U. S. patent 5,989,939).

In re claim 31, Fjelstad, in the U. S. patent 5,989,939; figures 1 – 24 and related text, discloses providing a film substrate 1 having a main surface, a rear surface opposing to the main surface, several device forming areas of the main surface 4 and electrode members 5 individually separated from one another and formed on the device forming areas (Figure 1C; Column 5, Lines 64 – 68); providing several semiconductor chips 6 each having a main surface thereof and electrodes 8 formed on the main surface thereof (Figure 2); arranging the semiconductor chips on respective ones of the device forming areas and electrically connecting the electrodes of the semiconductor chips with electrode members on the respective device forming areas (Figure 5); forming a resin encapsulater collectively sealing the several of device forming areas, the electrode members and the semiconductor chips (Figure 6); and cutting the resin and the film substrate between adjacent device forming areas by dicing (Column 11, Lines 1

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– 18); wherein the electrode members are spaced apart from a cutting surface resulting from the cutting step (Figures 24 and 7).

3. In re claim 32, Fjelstad discloses further including a step of separating the resin encapsulater from the film substrate and thereby revealing the electrode members on one side of the resin encapsulater before the cutting step (Figure 11).

4. In re claim 34, Fjelstad discloses wherein further including a step of plating the revealed electrode members, after the step of separating the resin encapsulater (Column 7, Lines 54 – 60).

5. In re claim 35, Fjelstad discloses wherein the plating step is performed before the cutting step (Column 11, Lines 19 – 35).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fjelstad as applied to claims 31, 32, 34 and 35 above, and further in view of Bennett et al. (U. S. patent 6,235,387 B1).

Fjelstad does not disclose wherein the cutting step includes a step of sticking dicing tape on another side of the resin encapsulater, wherein the another side is opposed to the one side of the resin encapsulater.

However, Bennett in the U. S. patent 6,235,387 B1 and related text, discloses that wafer dicing is conventionally carried out by attaching the backside of the wafer to the adhesive surface of a tape (often called a dicing tape), securing the tape wafer to a vacuum table to restrain it against movement (Column 3, Lines 31 – 36).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to stick a dicing tape on another side of the resin encapsulater, since, as taught by Bennett it is a conventional way to separate the dies from the wafer.

### ***Response to Arguments***

8. Applicant's arguments filed 18 April 2003 have been fully considered but they are not persuasive for the following reasons. Fjelstad discloses each and every one of the limitations of the independent claim 31 as noted in the rejection above. Also Fjelstad discloses the limitations of dependent claims 32, 34 and 35 as described in the rejection above with the proper citations of the reference where the limitations can be found.

9. The combination of Fjelstad and Bennett provide sufficient motivation for the rejection of dependent claim 33 as noted in the rejection above with the proper citations of the references where the limitation can be found.

10. Therefore, the newly submitted claims stand rejected.

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***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fernando Toledo whose telephone number is 703-305-0567. The examiner can normally be reached on Mon-Fri 8am to 4pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 703-306-2794. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7382 for regular communications and 703-308-7382 for After Final communications.

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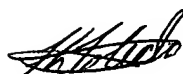
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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



George Fourson  
Primary Examiner  
Art Unit 2823



FToledo  
June 17, 2003